

Online Appendix for ‘Bringing in the New Votes: Women’s Turnout after Enfranchisement.’

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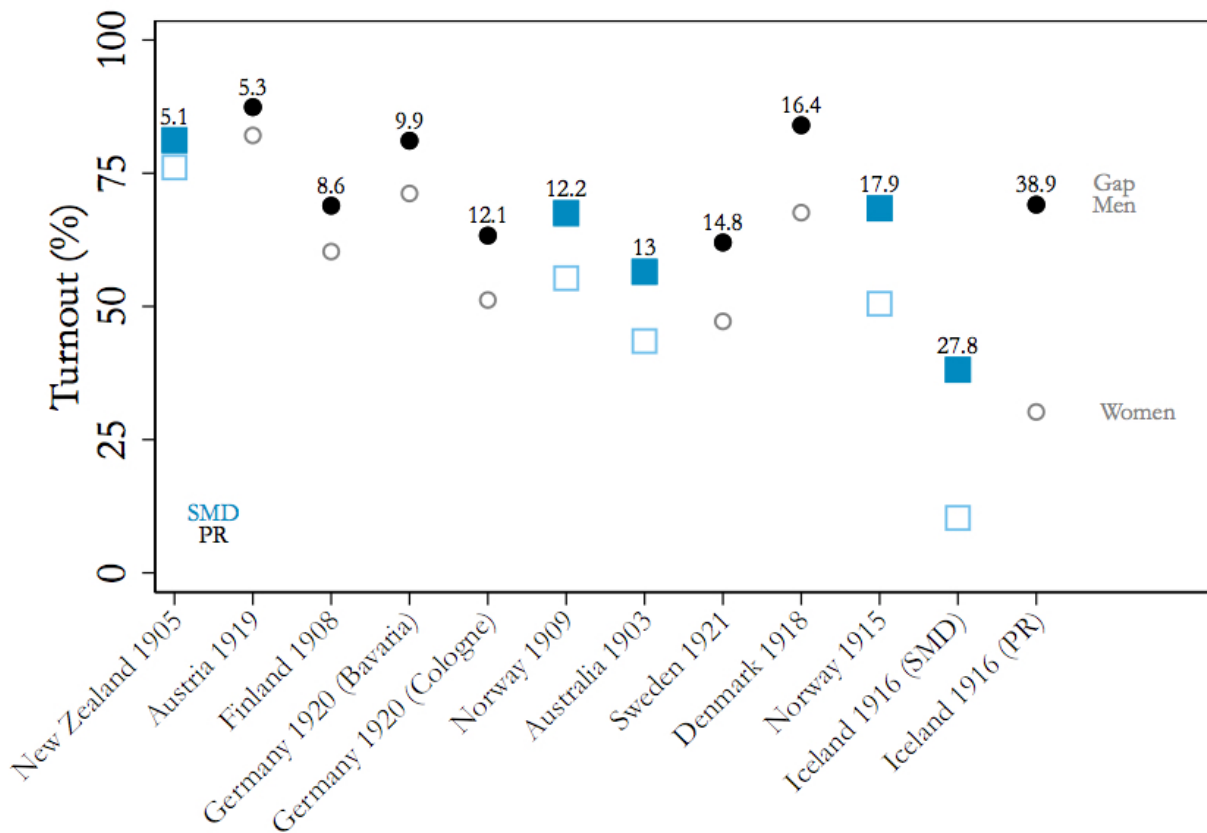
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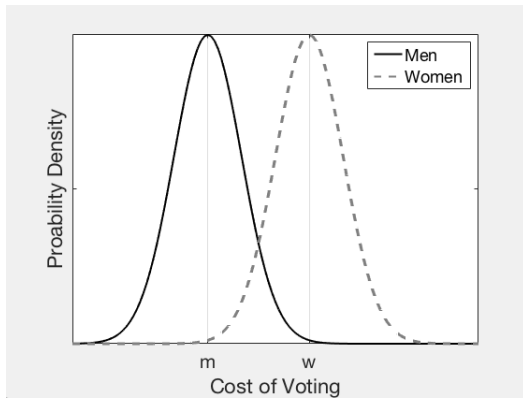
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Figure A1: Turnout in Countries that Enfranchised Women in the First Suffrage Wave in the West

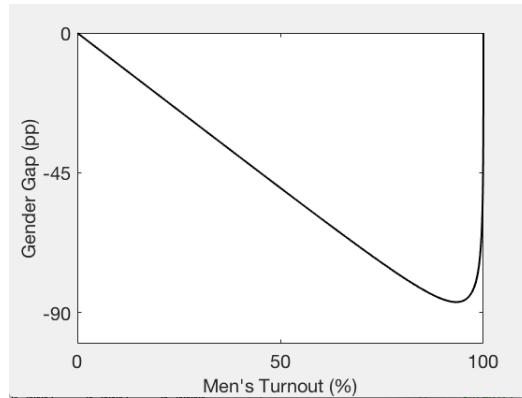


Notes: women's turnout in lighter colors, men's turnout in darker colors; squares denote countries with SMDs, circles denote countries with PR; numbers indicate the size of gender turnout gap (difference between percentage point men's and women's turnout); data sourced from Tingsten, Herbert. 1937. *Political Behavior: Studies in Election Statistics*. London: PS King, chapter 1; all election results refer to *parliamentary* elections in the *West* in the *first* election after suffrage, except in New Zealand (5th election), Germany (2nd) and Finland (2nd).

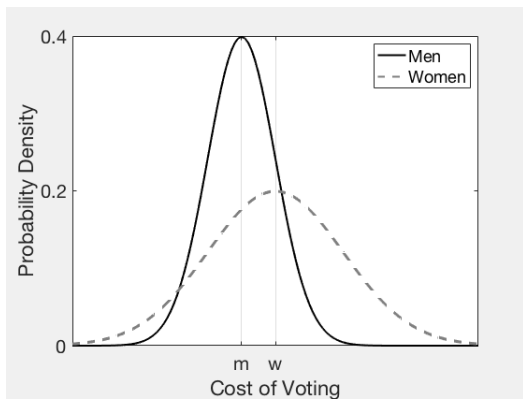
Figure A2: When Do Newly Enfranchised Women Vote More Relative to Men?



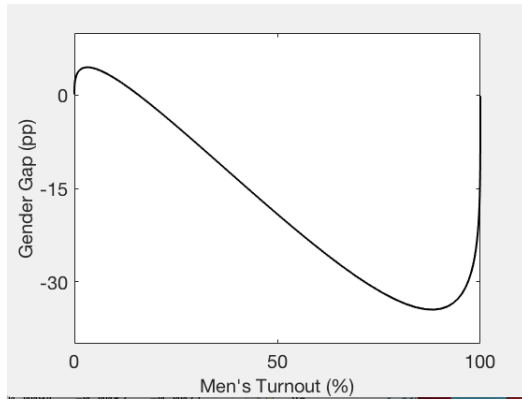
(a) Women's and Men's Cost of Voting



(b) Predicting Gender Gap in Figure 2a.



(c) Women's and Men's Cost of Voting



(d) Predicting Gender Gap in Figure 2c.

Notes: left column depicts women's and men's cost of voting; $m(w)$ mean cost of voting for men(women); right column plots turnout gap against men's turnout using the respective probability distributions on the left.

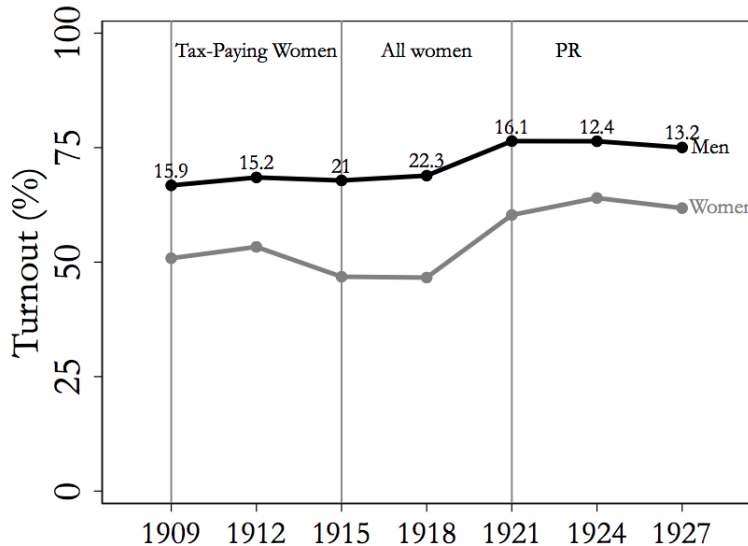
Data & Variables in Norway

Table A1: Description of Key Variables & Summary Statistics

Margin	Absolute difference between the percentage of votes cast for the winner and the runner-up.
HHI	Herfindahl-Hirschman index on a scale of 0 to 100, where 100 refers to one party gaining all votes.
Women's Turnout	The number of votes cast by women divided by the number of women eligible to vote.
Men's Turnout	The number of votes cast by men divided by the number of men eligible to vote.
Gender Turnout Gap	Percentage point difference between women's and men's turnout.

	N	Min	Max	Mean (Std.Dev)		N	Min	Max	Mean (Std.Dev)
<i>Election Year 1909 (SMD)</i>					<i>Election Year 1915 (SMD)</i>				
Margin	103	0.256	98.914	20.355 (20.711)	Margin	103	0.013	99.871	26.94 (22.076)
Women's Turnout	103	4.146	91.575	52.312 (23.195)	Women's Turnout	103	11.007	82.931	48.291 (19.269)
Men's Turnout	103	29.214	86.69	67.732 (13.344)	Men's Turnout	103	35.444	90.19	68.34 (12.057)
Gender Turnout Gap	103	-49.189	21.465	-15.421 (14.08)	Gender Turnout Gap	103	-48.448	15.32	-20.049 (11.966)
<i>Election Year 1921 (PR)</i>									
HHI	687	7.725	93.916	36.357 (11.506)					
Women's Turnout	687	12.291	89.825	52.856 (14.86)					
Men's Turnout	687	23.2	96.418	74.171 (9.557)					
Gender Turnout Gap	687	-48.017	18.902	-21.315 (10.16)					

Figure A3: Women's and Men's Turnout, 1909-1927



Notes: women's turnout in gray, men's turnout in black, labels refer to percentage point difference between men's and women's turnout (gender gap); turnout in decisive round in SMDs; exclusions of observations (inconsistent and multi-district municipalities) may introduce small differences between the data that are generated from disaggregated election data (as above) and corresponding official turnout statistics; 1909 enfranchised tax-paying women, 1915 enfranchised all women, 1921 introduced PR.

Supplementary Results in Norway

Table A2: The Cross-Sectional Effect of District Margin on Turnout 1909-1918 (Full Results)

Dep. Var.:	Women’s Turnout (1-4)				Men’s Turnout (5-8)				Gender Turnout Gap (9-12)			
Year:	1909	1912	1915	1918	1909	1912	1915	1918	1909	1912	1915	1918
Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Margin	-0.581** (0.088)	-0.552** (0.097)	-0.502** (0.079)	-0.425** (0.067)	-0.361** (0.069)	-0.248** (0.07)	-0.186** (0.052)	-0.234** (0.058)	-0.221** (0.053)	-0.304** (0.053)	-0.315** (0.043)	-0.19** (0.043)
R-sq	0.27	0.337	0.33	0.236	0.314	0.2	0.117	0.172	0.105	0.249	0.338	0.15
N	103	104	103	107	103	104	103	107	103	104	103	107

Notes: DV is women’s turnout (Models 1-4), men’s turnout (Models 5-8), gender turnout gap (Models 9-12); OLS estimates; robust standard errors; all models include a constant; ** < 1%; * < 5%; †<10%; unit of analysis is electoral district; election data refer to a decisive round; inconsistent observations and multi-district municipalities excluded from all models.

Table A3: The Cross-Sectional Effect of Within-District Concentration on Turnout Measures 1921-1927 (Full Results)

Dependent Variable:	Women’s Turnout (1-3)			Men’s Turnout (4-6)			Gender Turnout Gap (7-9)		
Year:	1921	1924	1927	1921	1924	1927	1921	1924	1927
Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Margin	0.2 (0.145)	0.118 (0.1)	0.269** (0.089)	0.055 (0.055)	-0.066 (0.051)	0.096 [†] (0.049)	0.145 (0.098)	0.185** (0.059)	0.173** (0.062)
District FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-sq	0.259	0.309	0.347	0.258	0.291	0.258	0.22	0.274	0.322
N	687	725	739	687	725	739	687	725	739

Notes: DV is women’s turnout (Models 1-3), men’s turnout (Models 4-6), gender turnout gap (Models 7-9); OLS estimates; robust standard errors; all models include a constant; ** < 1%; * < 5%; †<10%; unit of analysis is within-district municipality; inconsistent observations and multi-district municipalities excluded from all models; Wild bootstrap (calculated with BOOTTEST command in Stata, using recommended Rademacher weights, null imposed and 999 replications) returns higher but comparable p-values, all coefficients significant at 1% above remain significant at least at 5%.

Table A4: The Cross-Sectional Effect of District Margin on Turnout in 1909 (Robustness)

Dependent Variable:	Women's Turnout (1-3)			Men's Turnout (4-6)			Gender Turnout Gap (7-9)			Women's Share (10)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(10)
<i>Model</i>											
Margin	-0.581** (0.088)	-0.528** (0.089)	-0.51** (0.089)	-0.361** (0.069)	-0.334** (0.072)	-0.333** (0.071)	-0.221** (0.053)	-0.194** (0.051)	-0.178** (0.054)	-0.188** (0.042)	
Electorate Sex-Ratio											
		-23.809** (4.112)									
Urban			22.369** (4.416)		(2.01)	3.291 (3.042)		19.077** (4.039)			
Socialist Contender			5.276 (3.58)			2.824 (2.415)		2.452 (2.316)			
% Industrial Jobs			0.811* (0.318)			0.596** (0.224)		0.215 (0.22)			
% Intellectual Jobs			1.088 [†] (0.562)			0.386 (0.253)		0.703 (0.637)			
% Married Women			-0.618 (0.53)			-0.672 [†] (0.352)		0.054 (0.434)			
R-sq	0.27	0.429	0.647	0.314	0.438	0.48	0.105	0.21	0.536	0.15	
N	103	103	103	103	103	103	103	103	103	103	

Notes: DV is women's turnout (Models 1-3), men's turnout (Models 4-6), gender turnout gap (Models 7-9) and women's share of voters (Model 10); OLS estimates; robust standard errors; all models include a constant; ** < 5%; * < 10%; † < 10%; unit of analysis is electoral district; election data refer to a decisive round; inconsistent observations and multi-district municipalities excluded from all models; control variables aggregated from 1910 municipality-level census.

Electorate Sex-Ratio indicates sex-ratio in the electorate (eligible pool of voters), and is calculated as the number of men in the electorate divided by the number of women in the electorate; *Urban* indicates urban districts. It is coded as 1 if district is considered 'city' in the 1910 census, and 0 if districts is considered 'country'. *Socialist Contender* indicates districts where Socialists either secured a seat or had a reasonable chance to do so. It is coded as 1 for districts with a Socialist candidate that ranks first or second in the elections (i.e. is a winner or a candidate with the second largest number of votes) and 0 otherwise. *% Industrial Jobs* indicates % of women and men above 15 years of age who are employed in mining or manufacturing in the 1910 census. *% Intellectual Jobs* indicates % of women and men above 15 years of age who are employed in intellectual jobs, as defined in the 1910 census (civil administration, defense, religion, health, teaching, science, arts, charities). *% Married Women* indicates % of married women among women above 15 years of age in the 1910 census.

Table A5: The Cross-Sectional Effect of District Margin on Turnout in 1915 (Robustness)

Dependent Variable	Women's Turnout (1-3)		Men's Turnout (4-6)		Gender Turnout Gap (7-9)		Women's Share (10)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<i>Model</i>										
Margin	-0.502**	-0.507**	-0.314**	-0.186**	-0.188**	-0.098 [†]	-0.315**	-0.319**	-0.216**	-0.222**
	(0.079)	(0.08)	(0.077)	(0.052)	(0.052)	(0.056)	(0.043)	(0.043)	(0.04)	(0.037)
Electorate Sex-Ratio		-25.668*			-9.315			-16.353 [†]		
		(12.271)			(10.605)			(8.499)		
Urban			9.611*			2.783			6.827	
			(4.364)			(4.234)			(4.888)	
Socialist Contender			2.396			1.399			0.997	
			(2.95)			(2.511)			(1.824)	
% Industrial Jobs			1.086**			0.747**			0.34	
			(0.256)			(0.262)			(0.209)	
% Intellectual Jobs			1.498*			-0.088			1.586 [†]	
			(0.683)			(0.325)			(0.845)	
% Married Women			-0.395			-0.379			-0.015	
			(0.437)			(0.358)			(0.382)	
R-sq	0.33	0.353	0.575	0.117	0.124	0.24	0.338	0.362	0.576	0.307
N	103	103	103	103	103	103	103	103	103	103

Notes: DV is women's turnout (Models 1-3), men's turnout (Models 4-6), gender turnout gap (Models 7-9) and women's share of voters (Model 10); OLS estimates; robust standard errors; all models include a constant; ** < 1%; * < 5%; [†]<10%; unit of analysis is electoral district; election data refer to a decisive round; inconsistent observations and multi-district municipalities excluded from all models; control variables aggregated from 1910 municipality-level census.

Electorate Sex-Ratio indicates sex-ratio in the electorate (eligible pool of voters), and is calculated as the number of men in the electorate divided by the number of women in the electorate; *Urban* indicates urban districts. It is coded as 1 if district is considered 'city' in the 1910 census, and 0 if districts is considered 'country'. *Socialist Contender* indicates districts where Socialists either secured a seat or had a reasonable chance to do so. It is coded as 1 for districts with a Socialist candidate that ranks first or second in the elections (i.e. is a winner or a candidate with the second largest number of votes) and 0 otherwise. *% Industrial Jobs* indicates % of women and men above 15 years of age who are employed in mining or manufacturing in the 1910 census. *% Intellectual Jobs* indicates % of women and men above 15 years of age who are employed in intellectual jobs, as defined in the 1910 census (civil administration, defense, religion, health, teaching, science, arts, charities). *% Married Women* indicates % of married women among women above 15 years of age in the 1910 census.

Table A6: The Cross-Sectional Effect of Within-District Concentration on Turnout in 1921 (Robustness)

Dep. Var:	Women's Turnout (1-5)		Men's Turnout (6-10)			Gender Turnout Gap (11-15)			Women's Share (16)							
Model	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
HHI	0.2 (0.145)	0.197 (0.147)	0.262 [‡] (0.143)	0.241 (0.146)	0.055 (0.055)	0.048 (0.059)	0.077 (0.059)	0.145 (0.098)	0.15 (0.098)	0.185 [‡] (0.093)	0.171 [‡] (0.095)	0.083 (0.05)				
Margin (raw)	0.0048* (0.0023)	-4.575 (5.149)								0.0034 [‡] (0.0018)	6.869 [‡] (3.807)					
El. Sex-Ratio																
Urban				0.84 (3.652)	3.594 (3.29)	0.675 (2.345)	1.845 (2.384)	0.165 (2.06)	1.749 (1.48)							
Soc. Lead				5.346* (2.255)	7.23** (2.085)	2.83 (1.101)	3.468** (1.02)	2.515 [‡] (1.457)	3.762* (1.369)							
% Fact. Jobs				0.61** (0.161)	0.187 [‡] (0.109)	0.424** (0.071)		0.473** (0.116)								
% Fact. Jobs W						0.226* (0.11)		2.228** (0.621)								
% Intel. Jobs				3.134** (0.683)	0.7** (0.197)	0.906* (0.423)										
% Intel. Jobs W						4.198** (0.736)	0.88 (0.654)	3.318** (0.736)								
% Mar. W				-0.2 (0.191)	0.023 (0.236)	-0.225 [‡] (0.131)	-0.163 (0.136)	0.024 (0.097)	0.186 (0.129)							
District FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-sq	0.259	0.257	0.26	0.379	0.361	0.258	0.258	0.272	0.3	0.294	0.22	0.216	0.225	0.331	0.319	0.233
N	687	687	687	687	687	687	687	687	687	687	687	687	687	687	687	687

Notes: DV is women's turnout (Models 1-5), men's turnout (Models 6-10), gender turnout gap (Models 11-15) and women's share of voters (Models 16); OLS estimates; standard errors clustered at district; all models include a constant; ** < 1%; * < 5%; † < 10%; unit of analysis is within-district municipality; inconsistent observations and multi-district municipalities excluded from all models; control variables aggregated from 1920 municipality-level census; In models using HHI, Wild bootstrap (calculated with BOOTTEST command in Stata, using recommended Rademacher weights, null imposed and 999 replications) returns comparable p-values, with coefficients not significant at 5%. In models using raw margin, wild bootstrap returns comparable p-values, with coefficients significant at 1% in Models 2 and 12 and not significant at conventional levels in Model 7.

El. Sex-Ratio indicates sex-ratio in the electorate (eligible pool of voters), and is calculated as the number of men in the electorate divided by the number of women in the electorate. Urban indicates urban municipalities. It is coded as 1 if municipality is considered 'city' municipality in the 1920 census, and 0 if municipality is considered 'country'. Socialist Lead indicates municipalities where Socialists received the highest number of votes. It is coded as 1 for municipalities with a Socialist lead and 0 otherwise. % Factory Jobs indicates % of women and men above 15 years of age who are employed in factories in the 1920 census. % Intellectual Jobs indicates % of women above 15 years of age out of women above 15 years who are employed in factories in the 1920 census. % Intellectual Jobs indicates % of women and men above 15 years of age who are employed in intellectual jobs, as defined in the 1920 census (civil administration, defense, religion, health, teaching, science, arts, charities). % Intellectual Jobs Women indicates % of women above 15 years of age out of women above 15 years who are employed in intellectual jobs in the 1920 census. % Married Women indicates % of married women among women above 15 years of age in the 1920 census.

Table A7: The Effect of Competition on Turnout, Fixed Effects (Full Results)

Dependent Variable	Women's Turnout (1-2)		Men's Turnout (3-4)		Gender Gap (5-6)		Women's Share of Voters (7-8)	
	SMD	PR	SMD	PR	SMD	PR	SMD	PR
<i>Model</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Margin	-0.261**		-0.18**		-0.081**		-0.082**	
	(0.052)		(0.046)		(0.024)		(0.016)	
HHI		0.167**		0.105**		0.062*		0.05**
		(0.045)		(0.044)		(0.028)		(0.015)
Election FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Unit FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-sq (within)	0.219	0.073	0.165	0.058	0.239	0.099	0.8	0.087
N obs.	366	1995	366	1995	366	1995	366	1995
N groups	92	702	92	702	92	702	92	702

Notes: DV is women's turnout (Models 1-2), men's turnout (Models 3-4), gender turnout gap (Models 5-6) and women's share of voters (Models 7-8); OLS estimates; all models include a constant; ** < 1%; * < 5%; † < 10%.

Models for SMD elections: use 1909-1918 election years, unit of analysis is electoral district, robust standard errors, all models include election and district fixed effects.

Models for PR elections: use 1921-1924 election years, unit of analysis is a within-district municipality, standard errors clustered at district level, all models include election and municipality fixed effects; inconsistent observations and multi-district municipalities excluded from all models; Wild bootstrap (calculated with BOOTTEST command in Stata, using recommended Rademacher weights, null imposed and 999 replications) returns comparable p-values (p<0.05 in Models 2,4,6,8 respectively).

Table A8: Lagging Electoral Competition in Norway 1909

Dependent Variable	Women's Turnout (1-2)		Men's Turnout (3-4)		Gender Turnout Gap (5-6)	
<i>Model</i>	(1)	(2)	(3)	(4)	(5)	(6)
Margin	-0.576**		-0.358**		-0.218**	
	(0.087)		(0.069)		(0.053)	
Margin Lagged		-0.308**		-0.137**		-0.17**
		(0.066)		(0.04)		(0.041)
R-sq	0.27	0.186	0.314	0.112	0.104	0.153
N obs.	102	102	102	102	102	102

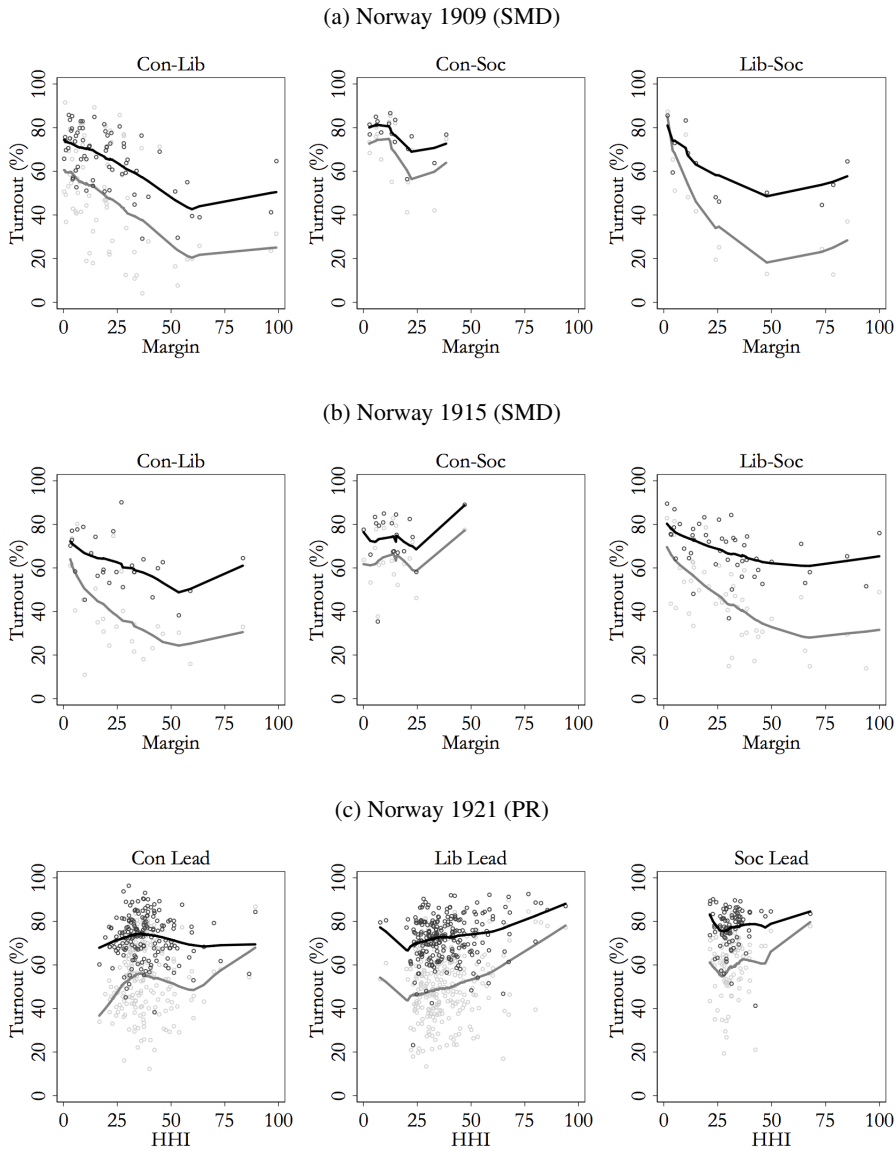
Notes: DV is women's turnout (Models 1-2), men's turnout (Models 3-4), and gender turnout gap (Models 5-6); OLS estimates; all models include a constant; ** < 1%; * < 5%; † < 10%; unit of analysis is electoral district; robust standard errors; inconsistent observations and multi-district municipalities excluded from all models; municipalities that changed boundaries between the two relevant elections (t, t-1) excluded from lagged models.

Table A9: Lagging Electoral Competition in Sweden 1921

Dependent Variable	Women's Turnout (1-2)		Men's Turnout (3-4)		Gender Turnout Gap (5-6)	
<i>Model</i>	(1)	(2)	(3)	(4)	(5)	(6)
HHI	0.258**		0.156**		0.102**	
	(0.048)		(0.039)		(0.022)	
HHI Lagged		0.158**		0.094**		0.064**
		(0.035)		(0.028)		(0.015)
District FEs	Yes	Yes	Yes	Yes	Yes	Yes
R-sq	0.203	0.176	0.206	0.194	0.179	0.161
N obs.	2483	2443	2483	2443	2483	2443

Notes: DV is women's turnout (Models 1-2), men's turnout (Models 3-4), and gender turnout gap (Models 5-6); OLS estimates; all models include a constant; ** < 1%; * < 5%; † < 10%; unit of analysis is a within-district municipality; standard errors clustered at district level; all models include district fixed effects; inconsistent observations excluded from all models; municipalities that changed boundaries between the two relevant elections (t, t-1) excluded from lagged models; Wild bootstrap (calculated with `BOOTTEST` command in Stata, using recommended Rademacher weights, null imposed and 999 replications) returns comparable p-values (p < 0.01 in all models).

Figure A4: Mobilization Advantage



Notes: Sub-figures a and b: First column restricts sample to districts where the top two candidates were Conservative and Liberal, second column to Conservative and Socialists and third column to Liberal and Socialist; inconsistent observations and multi-district municipalities excluded. Sub-figure c: First column restricts sample to municipalities where Conservatives had a lead, second column where Liberals had a lead and a third column where Socialists had a lead; inconsistent observations and multi-district municipalities excluded.

If some parties had mobilization advantage among women, we would expect electoral competition to affect gender gap depending on who runs in a district (in SMD) or who leads in a municipality (for PR). However, the results below demonstrate that this is not the case. Whilst weak or no relationship is observed in Conservative-Socialist districts in 1909 and 1915, the lack of uncompetitive districts does not allow us to make robust conclusions there. Overall, while women likely had different preferences to men, and some parties had mobilization advantage, these results suggest this cannot comprehensively explain the impact of competition on the gender gap.

Table A10: The Effect of District Competition in PR, 1921-1927

Dep. Var:	Women's Turnout (1-3)			Men's Turnout (4-6)			Gender Turnout Gap (7-9)		
<i>Model</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Margin (District)	0.973 (0.649)	0.428 (0.586)	0.015 (0.339)	0.241 (0.361)	0.006 (0.326)	-0.076 (0.277)	0.732* (0.361)	0.422 (0.349)	0.091 (0.182)
El. Sex-Ratio		-48.737** (10.357)			-21.016** (7.271)			-27.72** (9.866)	
Urban			-2.315 (2.903)			-1.125 (2.145)			-1.19 (1.626)
% Socialist			0.29** (0.078)			0.202** (0.067)			0.089 [‡] (0.052)
% Fact. Jobs			0.783** (0.198)			0.406** (0.152)			0.377** (0.116)
% Intel. Jobs			2.88** (0.764)			-0.059 (0.68)			2.939** (0.546)
% Mar. W			-0.258 (0.315)			-0.457 (0.311)			0.199 (0.243)
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-sq	0.052	0.23	0.66	0.031	0.135	0.339	0.116	0.259	0.712
N	66	66	66	66	66	66	66	66	66

Notes: DV is women's turnout (Models 1-3), men's turnout (Models 4-6), and gender turnout gap (Models 7-9); OLS estimates; robust standard errors; all models include a constant; ** < 1%; * < 5%; † < 10%; unit of analysis is PR district; 66 districts as in Cox, Fiva and Smith (2020); census control variables aggregated from 1920 municipality-level census.

El. Sex-Ratio indicates sex-ratio in the electorate (eligible pool of voters), and is calculated as the number of men in the electorate divided by the number of women in the electorate. *Urban* indicates districts with at least one urban municipality. *Socialist* indicates percentage point vote for Socialists. *% Factory Jobs* indicates % of women and men above 15 years of age who are employed in factories in the 1920 census. *% Intellectual Jobs* indicates % of women and men above 15 years of age who are employed in intellectual jobs, as defined in the 1920 census (civil administration, defense, religion, health, teaching, science, arts, charities). *% Married Women* indicates % of married women among women above 15 years of age in the 1920 census.

Table A11: The Effect of Within-District Competition in SMDs in 1909 & 1915

Dependent Variable	Norway 1909			Norway 1915				
	Women (1)	Men (2)	Gap (3-4)		Women (5)	Men (6)	Gap (7-8)	
<i>Model</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
HHI	0.015	-0.03	0.044	0.124	-0.024	-0.004	-0.02	-0.093
	(0.074)	(0.049)	(0.055)	(0.099)	(0.076)	(0.061)	(0.047)	(0.115)
Margin dummy			23.615**				21.294**	
			(6.506)				(5.837)	
HHI * Margin dummy			-0.111				0.103	
			(0.118)				(0.124)	
SMD District FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-sq	0.705	0.651	0.56	0.561	0.649	0.55	0.507	0.509
N obs.	627	627	627	627	662	662	662	662

Notes: DV is women's turnout (Models 1,5), men's turnout (Models 2,6), and gender turnout gap (Models 3-4,7-8); OLS estimates; all models include a constant; ** < 1%; * < 5%; † < 10%; unit of analysis is municipality; clustered standard errors on districts; inconsistent observations and multi-district municipalities excluded from all models; Margin dummy refers to a binary indicator of high (above median) and low (below median) district margin.

Table A12: The Effect of Competition on Change in Turnout, 1918-1921 (Full Results)

Dependent Variable:	Women's Turnout	Men's Turnout	Gender Gap
<i>Model</i>	(1)	(2)	(3)
Margin Fin. 1918	0.515**	0.371**	0.145*
	(0.087)	(0.049)	(0.057)
R-sq	0.382	0.348	0.084
N	104	104	104

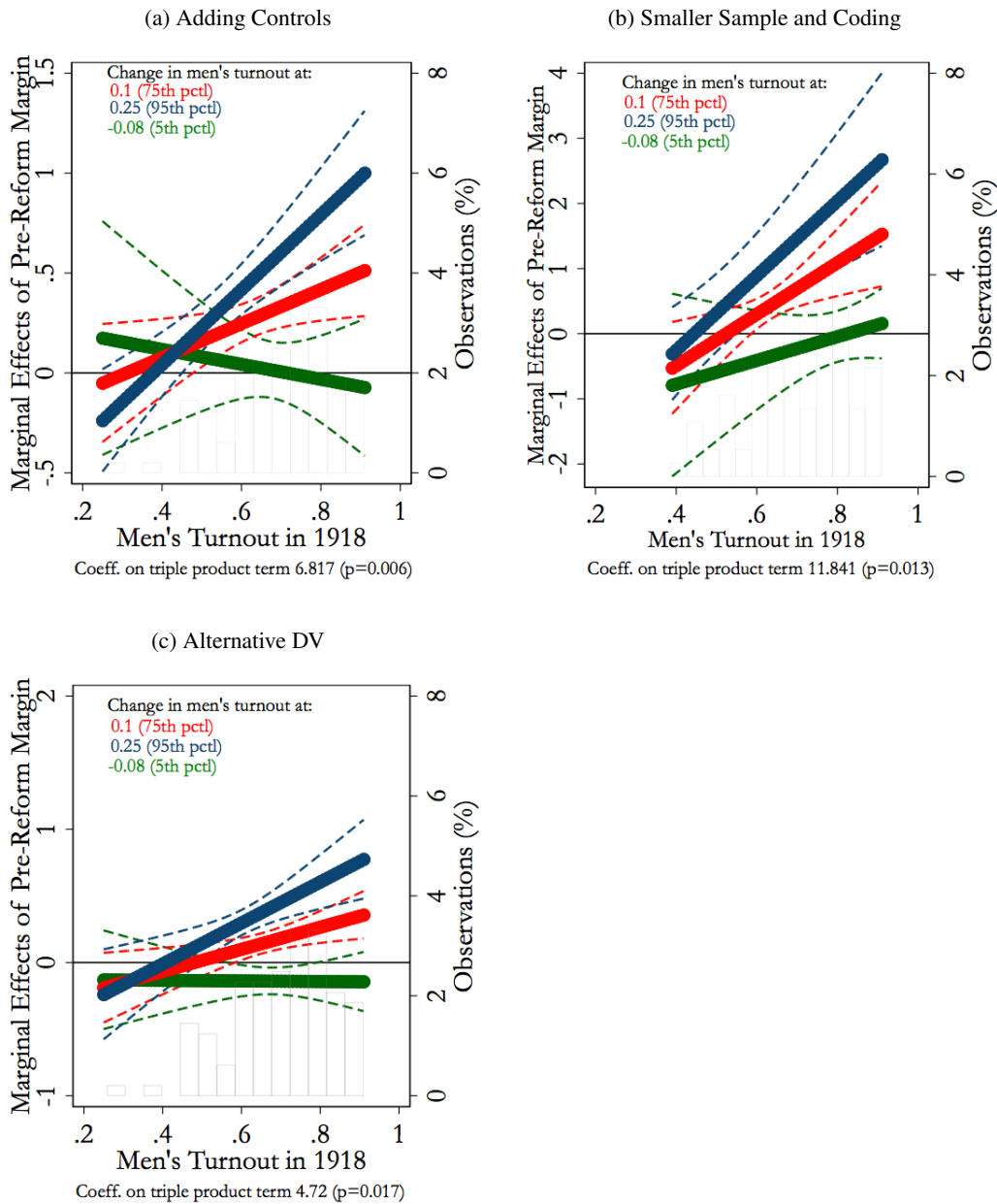
Notes: This table presents full result for the effect of pre-reform district margin on change in gender turnout gap after the reform as presented in Figure 6 in the manuscript; OLS estimates; standard errors clustered at district; all models include a constant; ** < 1%; * < 5%; † < 10%; unit of analysis is pre-reform SMD district; multi-district municipalities excluded from all models; wild bootstrap (calculated with BOOTTEST command in Stata, using recommended Rademacher weights, null imposed and 999 replications) returns comparable p-values in all models (p<0.05).

Table A13: The Effect of Competition on Change in Turnout, 1918-1921 (Robustness)

	Replicating Cox et al (2016) Separating Cox et al (2016) by Sex															
Dep. Variable:	Ch. Turnout 1921-18					Ch. Gender Gap 1921-18										
<i>Model</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	Alt.
Margin 1st 1909-18	0.649** (0.095)	0.211 [†] (0.118)	0.211 [†] (0.118)	0.134 (0.115)	0.132 (0.111)											
Margin 1st 1918		0.424** (0.071)						0.166** (0.051)	0.165** (0.052)	0.136** (0.043)	0.15** (0.045)	0.145* (0.057)	0.144* (0.057)	0.118* (0.049)	0.127* (0.05)	0.196** (0.05)
Margin Fin. 1918			0.437** (0.064)													
Elect. Sex-Ratio				0.026 (0.113)				0.014 (0.108)					0.008 (0.109)			
Urban					-0.009 (0.031)	-0.002 (0.028)		-0.004 (0.036)	-0.004 (0.036)	0.008 (0.031)	0.008 (0.031)	-0.002 (0.037)	-0.002 (0.037)	0.008 (0.032)		
Soc. Cont.					-0.026 [†] (0.014)	-0.023 (0.015)		-0.035* (0.016)	-0.035* (0.016)	-0.031 [†] (0.017)	-0.031 [†] (0.017)	-0.037* (0.016)	-0.037* (0.016)	-0.035 [†] (0.017)		
% Fact. Jobs					-0.004* (0.002)	-0.004* (0.002)		-0.004* (0.002)	-0.004* (0.002)	-0.004* (0.002)	-0.004* (0.002)	-0.004* (0.002)	-0.004* (0.002)	-0.004* (0.002)		
% Fact. Jobs W.					-0.005 (0.004)	-0.005 (0.004)		-0.005 (0.004)	-0.005 (0.004)	-0.005 (0.004)	-0.005 (0.004)	-0.005 (0.004)	-0.005 (0.004)	-0.005 (0.004)		
% Intel. Jobs					-0.005 (0.004)	-0.005 (0.004)		-0.005 (0.004)	-0.005 (0.004)	-0.005 (0.004)	-0.005 (0.004)	-0.005 (0.004)	-0.005 (0.004)	-0.005 (0.004)		
% Intel. Jobs W.					-0.023* (0.011)	-0.023* (0.011)		-0.023* (0.011)	-0.023* (0.011)	-0.023* (0.011)	-0.023* (0.011)	-0.023* (0.011)	-0.023* (0.011)	-0.023* (0.011)		
% Mar. W					-0.001 (0.002)	-0.001 (0.002)		-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)		
R-sq	0.428	0.374	0.405	0.077	0.078	0.263	0.263	0.108	0.108	0.299	0.307	0.084	0.084	0.283	0.283	0.262
N	92	104	104	92	92	92	92	104	104	104	104	104	104	104	104	104

Notes: This table replicates Cox, Smith and Fiva (2016) main result (Model 1) with alternative coding decisions (Models 2 & 3) and presents full result for the effect of pre-reform district margin on change in gender turnout gap after the reform, as presented in Figure 6 in the manuscript (see Model 12), together with alternative coding decisions and robustness to controls (Models 13-16). Original Cox, Smith and Fiva coding decisions use mean margin 1909-1918 from first round elections and therefore drop districts with reshuffled municipalities between 1909-1918 (Model 1 and Models 4-7 for gender turnout gap). All other models use 1918 margin, which avoids dropping districts with reshuffled municipalities and increases N from 92 to 104. Models 2 & 8-11 use Margin 1918 from first round and Models 3 & 12-15 use Margin 1918 from decisive round. Model 16 uses alternative DV: women's share of voters; OLS estimates; standard errors clustered at district; all models include a constant; ** < 1%; * < 5%; † < 10%; unit of analysis is pre-reform SMD district; multi-district municipalities excluded from all models; census control variables aggregated from 1920 municipality-level census. All control variables defined in Tables A4-6; Wild bootstrap (calculated with BOOTTEST command in Stata, using recommended Rademacher weights, null imposed and 999 replications) returns comparable p-values in Models 1-3 (p<0.01), larger p-values in Models 4-7 that are not statistically significant at conventional levels, similar p-values in Models 8-11 (p<0.05), somewhat larger p-values in Models 12-15 (p<0.1) and comparable p-values in models using women's share of voters (p<0.1).

Figure A5: Marginal Effects of Pre-Reform Margin Conditional on Men's Turnout and Change in Men's Turnout



Notes: Marginal effects of pre-reform margin conditional on pre-reform men's turnout and change in men's turnout before and after PR reform; Slopes refer to 0.25 (95th pct), 0.1 (75th pct) and -0.08 (5th pct) values of change in men's turnout before and after the reform; Notes reports a product term of a three-way interaction between pre-reform margin, men's turnout and change in men's turnout; OLS estimates; standard errors clustered on post-reform PR districts. Sub-figure a adopts all coding decisions as in Figure 7 in the paper, but adds full set of women's controls as defined in Table A13. Sub-figure b uses a smaller sample with coding decisions as in Cox, Fiva and Smith (2016) (N=92) (as defined in Table A13). Sub-figure c uses alternative dependent variable (women's share of voters). Full results in Table A14 (Models 2-4). Wild bootstrap (calculated with BOOTTEST command in Stata, using recommended Rademacher weights, null imposed and 999 replications) returns similar p-values on the product term (p<0.05 in all sub-figures).

Table A14: Marginal Effects of Pre-Reform Margin Conditional on Men’s Turnout and Change in Men’s Turnout (Full Results with Robustness)

<i>Model</i>	Full Results Fig.7	Robust: Controls	Robust: Coding	Robust: DV
	(1)	(2)	(3)	(4)
Margin 1918	-0.474 (0.316)	0.032 (0.338)	-1.752 (1.059)	-0.245 (0.225)
Men’s Turnout 1918	-0.328 [‡] (0.182)	-0.029 (0.183)	-0.698* (0.277)	-0.204* (0.075)
Margin * Men’s Turnout	0.81 [‡] (0.465)	0.172 (0.498)	2.77 [‡] (1.429)	0.357 (0.325)
Change Men’s Turnout	-0.3 (0.716)	0.42 (0.638)	0.174 (1.074)	0.419 (0.567)
Margin * Change Men’s Turnout	-2.47 (1.642)	-2.953 [‡] (1.494)	-3.158 (3.742)	-1.512 (1.147)
Men’s Turnout * Change Men’s Turnout	-1.432 (0.958)	-1.179 (0.802)	-2.025 (1.241)	-0.745 (0.711)
Margin* Men’s Turnout * Change Men’s Turnout	7.373* (2.802)	6.817** (2.263)	11.841* (4.364)	4.72* (1.84)
Urban (binary)		0.009 (0.031)		
Socialist Contender (binary)		-0.035* (0.017)		
% Factory Jobs among Women		-0.003 (0.003)		
% Intellectual Jobs among Women		-0.031** (0.01)		
% Married Women		-0.002 (0.002)		
R-sq	0.252	0.407	0.3	0.526
N obs.	104	104	104	104

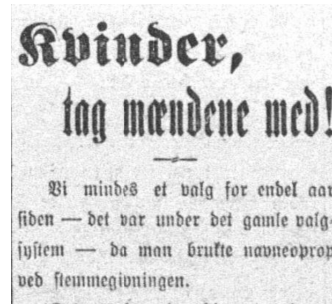
Notes: DV is gender turnout gap; OLS estimates; standard errors clustered on post-reform PR districts; all models include a constant; ** < 1%; * < 5%; ‡ < 10%. Model 1 provides full results for manuscript Figure 7; Model 2 adds full set of women’s controls as defined in Table A13. Model 3 uses a smaller sample with coding decisions as in Cox, Fiva and Smith (2016) (N=92) (as defined in Table A13); Model 4 uses alternative dependent variable, women’s share of voters; Marginal effects plotted in Figure 7 & Figure A5; Wild bootstrap (calculated with BOOTTEST command in Stata, using recommended Rademacher weights, null imposed and 999 replications) returns similar p-values on the triple product term (p<0.05), see also notes in Table A12 & Figure A5.

Figure A6: Examples of Election Ads in Newspapers

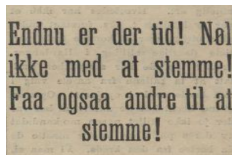
(a) General Socialist Ad



(b) Women’s Socialist Ad



(c) General Liberal Ad



(d) Women’s Liberal Ad



(e) General Conservative Ad



(f) Women’s Conservative Ad



Sub-figure a): Election ad published in Social-Demokraten on October 16, 1909 that encourages workers to vote in Kristiania. The article also provides list of Socialist candidates running in the city, with pictures and information on the candidates. The article seeks to mobilize workers, both women and men with a captive title *“Workers! Men and women! Show up on Monday and vote!”*

Sub-figure b): Election ad published in Social-Demokraten on October 16, 1909 that encourages women to mobilize men, titled *“Women, bring the men!”*

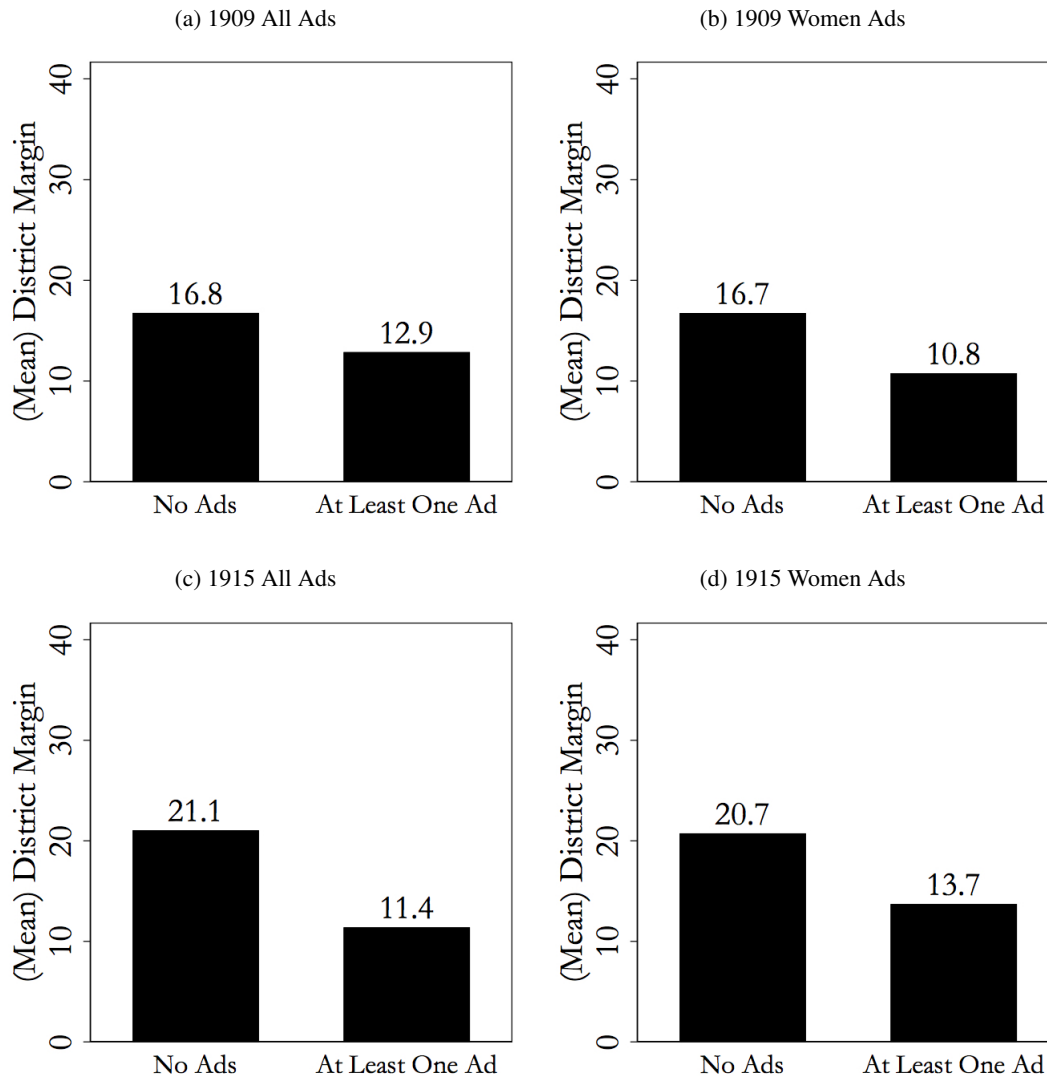
Sub-figure c): Election ad published in Dagbladet on October 18, 1909 that encourages everyone to vote. *“There is still time. Do not hesitate to vote. Encourage others to vote too.”*

Sub-figure d): Election ad published in Dagbladet on October 15, 1909 that encourages women to vote. The article is signed by 31 women from all over the country and calls on women to use their vote for the Liberal party. The article lists several reasons why women should support the Liberals, such as to support other women, peace and development. *“Norwegian Women! For the first time this year, we will vote as Norwegian citizens. Let us place ourselves in the ranks of those who fight for the rights of the weak and oppressed and work for better social conditions.”*

Sub-figure e): Election ad published in Morgenbladet in October 16, 1909 that encourages people to vote, provides information on where people should vote and who should they vote for, titled *“Where should you vote on Monday?”*

Sub-figure f): Election ad published in Morgenbladet in October 16, 1909 that calls on women to use their vote for the Conservative party. The article lists several reasons why women should support the Conservatives, such as personal autonomy and protection of home and family. The article is titled *“From women to women!”*

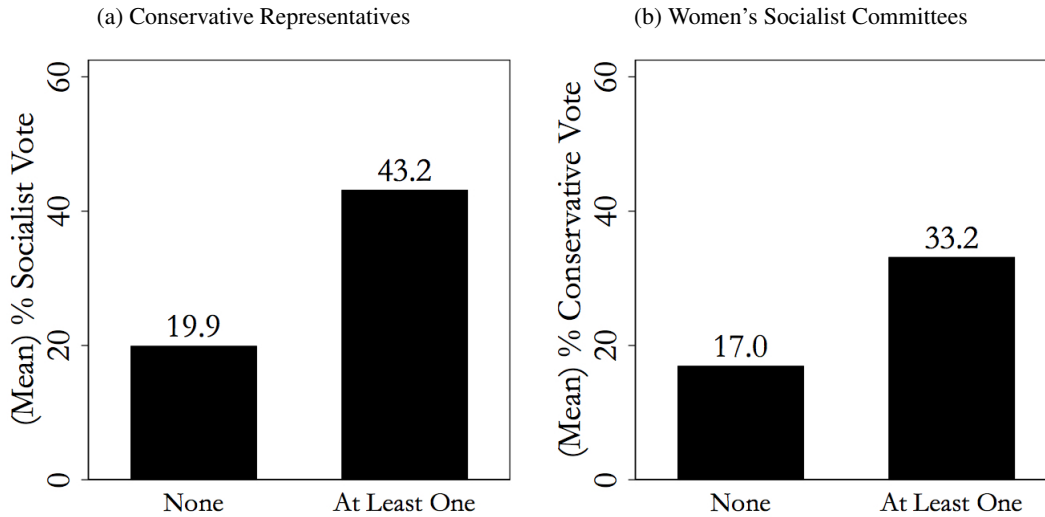
Figure A7: Mean District Margin by Newspaper Candidate Endorsements in Norway in 1909 and 1915.



Notes: Mean district margin (from decisive round) for district without a district-specific ad and for districts with at least one district-specific ad; Multi-district municipalities excluded.

Original data on election ads collected from three national newspapers that were digitized by the National Library of Norway. Each of the three national newspapers supported one of the major parties: Morgenbladet supported the largest Conservative coalition, Dagbladet supported the second largest Liberal party, and Social-Demokraten supported the Socialists. I collect this data in the last week (for the last seven days) before election in 1906 (pre-suffrage), 1909 (post-suffrage first reform) and 1915 (post-suffrage second reform). The issues of Social-Demokraten are only systematically digitized by the National Library of Norway in 1909. In the last week before election, Morgenbladet published 15, 17 and 15 issues the week before elections in 1906, 1909 and 1915 elections respectively. Dagbladet published 8, 8 and 10 issues respectively, and Social-Demokraten published 8 issues in 1909. Across these issues, a total of 222 articles encouraged people to vote. Election articles that either directly encourage people to vote, or quote a speaker who encourages people to vote are coded as ads. Examples of ‘ads’ per newspaper are depicted in Figure A6 above.

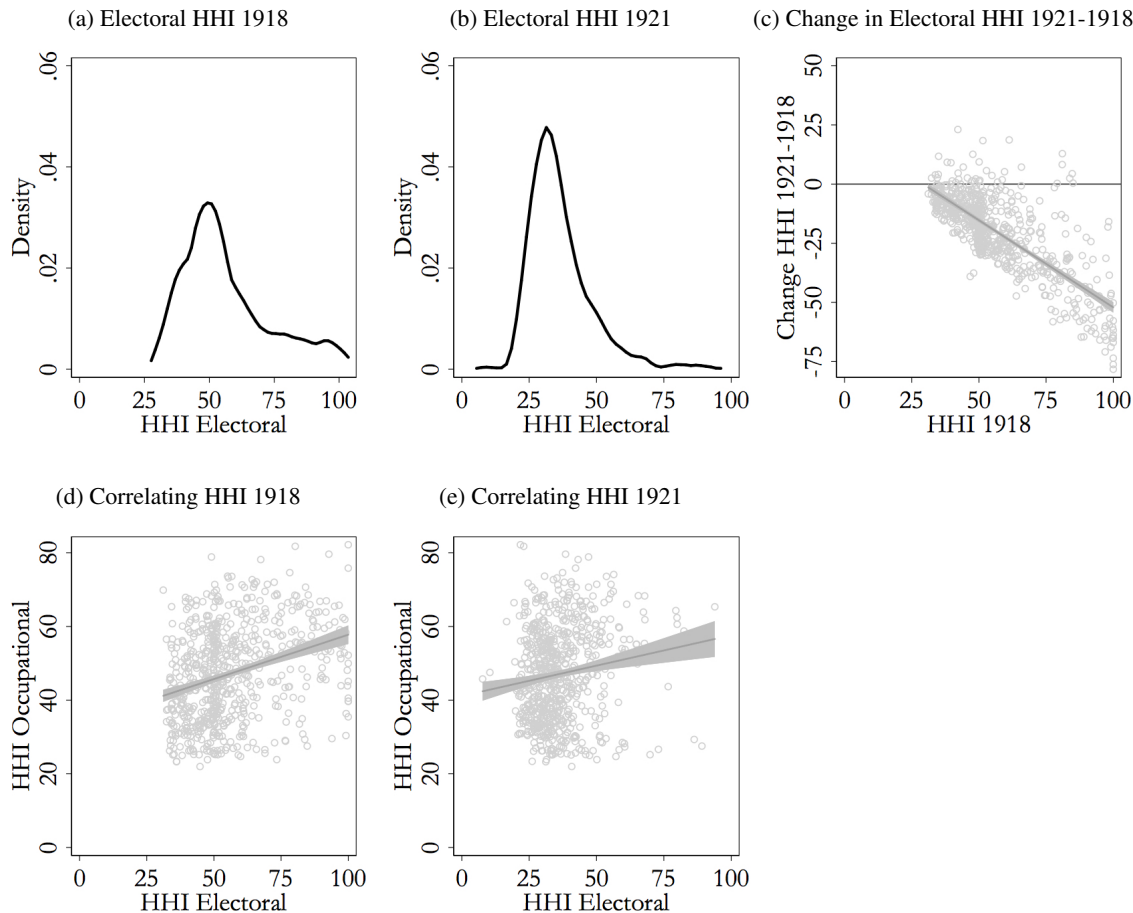
Figure A8: Mean Party Support By Local Party Presence and Activity in Norway in 1915



Sub-figure a: Mean % Conservative support (from decisive round) for municipalities that had a representative at the National Conservative Meeting in 1913 and those that did not. List of representatives from the Conservative Party’s central committee’s minutes at the National Archives (Riksarkivet), *RA/PA-0583/1/A/Aa/L0004 De konservative foreningers centralstyre, referatprotokoll (1910-1920)*. The minutes prior to 1909 record names of local committees, some of which were at the larger county level. This prevents fine-grained disaggregation at the local level. Records after 1909 refer to locations of all representatives who were invited and attended the meeting. In 1913, there were 48 individual representatives at the national meeting. Location of 3 local representatives was ambiguous and could not be geocoded. For example, the name of local committees referred to multiple towns or neighborhoods in different municipalities. The 45 geocoded representatives span 38 municipalities, with several municipalities having more than one representative.

Sub-figure b: Mean % Socialist support (from decisive round) for municipalities without local women’s socialist committee and for municipalities with at least one local women’s socialist committee in 1915. List of local branches of the Socialist Women’s Union from *Kvinde magazine 1909-1915, Arbeiderbevegelsens arkiv og bibliotek*. By the time women voted on the same terms as men in parliamentary elections in 1915, there were 98 distinct local women’s committees. Out of the 98, 15 local committees provided ambiguous location and could not be geocoded. For example, the name of local committees referred to multiple towns or neighborhoods in different municipalities. The 83 geocoded committees span 52 municipalities, with several municipalities having more than one committee.

Figure A9: Electoral and Occupational Homogeneity in 1918 and 1921



Notes: Sub-figure a: kernel density of electoral HHI in 1918; sub-figure b: kernel density of electoral HHI in 1921, sub-figure c: correlation between electoral HHI in 1918 (x-axis) and a change in electoral HHI between 1921 and 1918 (y-axis), with negative numbers indicating decrease in electoral concentration between 1918 and 1921. Sub-figure d: plots electoral HHI against occupational HHI in 1918, with a linear fit and 95% CIs; Sub-figure e: plots electoral HHI against occupational HHI in 1921, with a linear fit and 95% CIs. The 1918 election were the last election under SMDs, the 1921 election were the first election under PR.

Occupational HHI is calculated as a Herfindahl-Hirschman index of concentration of five occupational categories that broadly correspond with class: Agricultural and Fishing Worker, Manufacturing, Mining & Construction Worker (Crafts, Factory, Mining, Construction), Service Worker (Transport, Post, Retail, Hotel, Maritime, Domestic Service, Housing and Laundry), Non-Worker (Business Services, Trade, Banks, Owners, Intellectual - civil administration, defense, religion, health, teaching, science, arts, charities), Dependents (Public and Private Retirees). Similar categories are used in Morgan-Collins and Natusch (2021). I use only occupational categories for men. While using men’s occupational categories fails to take into account women’s occupational heterogeneity, severe distortions of women’s labour in official statistics make it hard to accurately capture occupational heterogeneity and use it to predict class. Only about a third of women were in gainful employment in 1920, with most married and widowed women from all classes, whether employed or not, were coded as ‘dependents’.

Generalizability beyond Norway

Case Selection & Summary Statistics

Table A15: Western Countries that Enfranchised Women in the First Wave, 1890-1935

Country	Female Suffrage*	Sex-Separated Turnout Data Available	Sample	Districts
<i>Group I: Anglo-American and Off-shoots</i>				
New Zealand	1893	✓	✓	SMD
Australia	1903	✓	✗	SMD
United States	1920	Some	✗	SMD
Canada	1921	✗	✗	SMD
United Kingdom	1918, 1929	✗	✗	SMD
Ireland	1923	✗	✗	MMD
<i>Group II: Scandinavian</i>				
Finland	1907	✓	✗	MMD
Norway	1909, 1915	✓	✓	SMD
Denmark	1918	✓	✗	MMD
Sweden	1921	✓	✓	MMD
Iceland	1922	✓	✗	SMD, MMD
<i>Group III: Continental</i>				
Austria	1920	✓	✓	MMD
Germany	1920	Some	✗	MMD
Netherlands	1922	✗	✗	MMD
Spain	1933	✗	✗	MMD

Notes: * denotes first elections after suffrage; purple denotes countries in the sample; SMD refers to single member districts, MMD refers to multi-member districts; Data sourced from Tingsten, Herbert. 1937. Political Behavior: Studies in Election Statistics. London: PS King.

Table A16: Sampled Cases

	Women's Suffrage*	Enfranchised**	Electoral System
New Zealand	1893	adult women	SMD
Norway	1909, 1915	tax-paying (1st reform) and non-tax-paying women (2nd reform)	SMD - runoff
Austria	1919	adult women	PR
Sweden	1921	adult women	PR

Notes: * first elections under women's suffrage. ** reforms that enfranchised women and men on the same terms across all election types. However, exclusions among women and men remained even after women's suffrage in most cases, such as high age thresholds and various economic, criminal and capacity disenfranchisements (see Nohlen, D. and Stöver, P., 2010. Elections in Europe. Nomos Verlagsgesellschaft mbH & Co. KG.)

Table A17: Summary Statistics for Key Election Cases in All Samples Cases

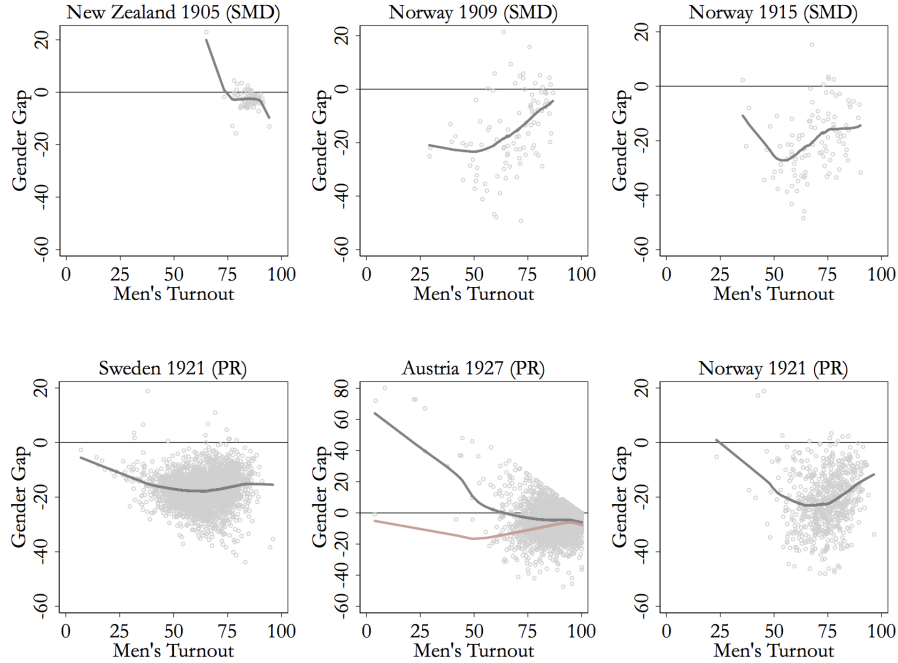
Case	Suffrage	Sampled	Election	Unit	N
<i>SMD</i>					
New Zealand	1893	1905	5th	District	75
Norway	1909	1909	1st	District	103
Norway	1915	1915	1st	District	103
<i>PR</i>					
Norway	1909,1915	1921	3rd/5th	Municipal	687
Sweden	1921	1921	1st	Municipal	2,483
Austria	1919	1927	3rd	Municipal	3,987

Notes: 'Suffrage' denotes first election under women's suffrage; 'Sampled' denotes election year under analysis; 'Election' refers to the number of elections after women's suffrage in a sampled case.

In New Zealand, sampled election year refers to the fifth election after women's suffrage, as registration rules have not been consolidated until Electoral Act 1905. Earlier sex-separated data often suffer from several issues, such as 'double' registration. In Austria, sampled election year refers to the third election after women's suffrage, as sex-separated election data in earlier years are not available at a high level of disaggregation. In Norway, I sample first election after the first suffrage reform (1909), first election after the second suffrage reform (1915) and first election after the switch from SMD to PR (1921). Municipalities which return inconsistent vote totals are excluded. The exclusions never exceed 10% of total observations.

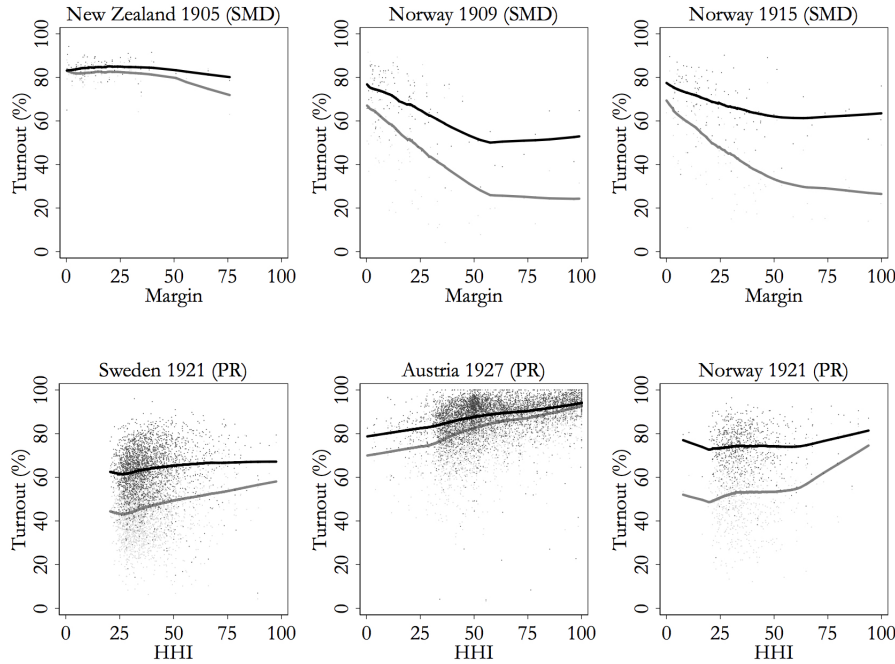
Results

Figure A10: Gender Gap Across Localities Against Men's Turnout in All Election Cases



Notes: plotting gender turnout gap against men's turnout; Lowess fit in gray; Lowess fit in red restricts the sample to municipalities with a negative (traditional) gender gap; top row refers to election cases under SMDs, bottom row to election cases under PR; unit of analysis in countries with PR is a municipality, unit of analysis in countries with SMD is electoral district. Turnout in New Zealand (SMD) and Austria (PR) never or almost never dropped below 50%, mostly preventing us to observe the theorized U-shaped relationship.

Figure A11: Scatter Plot of Competition and Women’s and Men’s Turnout in All Election Cases



Notes: plotting competition on women’s (gray) and men’s (black) turnout; Lowess fit; top line refers to election cases under SMDs, bottom row to election cases under PR; unit of analysis in countries with PR is within district municipality, unit of analysis in countries with SMD is electoral district.

Table A18: Correlates of Women’s and Men’s Turnout in Three Additional Countries (Full Results)

Dependent Variable	New Zealand SMD (Models 1-3)			Sweden PR (Models 4-6)			Austria PR (Models 7-9)		
	M	W	Gap	M	W	Gap	M	W	Gap
<i>Model</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Margin	-0.011 (0.037)	-0.072 (0.061)	-0.061 (0.05)						
HHI				0.156** (0.039)	0.258** (0.048)	0.102** (0.022)	0.061** (0.012)	0.128** (0.022)	0.067** (0.015)
R-sq	0.002	0.051	0.043	0.206	0.203	0.179	0.219	0.298	0.096
N obs.	75	75	75	2483	2483	2483	3986	3987	3986

Notes: DV is men’s turnout (M), women’s turnout (W), gender gap (Gap); OLS estimates; all models include a constant; ** < 1%; * < 5%; † < 10%; robust standard errors in SMDs; district fixed effects and clustered standard errors on district in PR; Wild bootstrap (calculated with BOOTTEST command in Stata, using recommended Rademacher weights, null imposed and 999 replications) returns comparable p-values in all models using PR elections (p<0.01).